APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/437,205	11/09/1999	ALEXANDER G. MACINNIS	36103/SAH/B6	7650

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EXAMINER
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ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 July 2002</u> .

2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 25-41* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7,8,21,22,27,28,40 and 41* is/are allowed.

6)☒ Claim(s) *1-6,9-20,23,25,26 and 29-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *12,13,16* .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

Continued Prosecution Application

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/18/02

has been entered.

2.   This action is responsive to communications: Amendment, filed on 7/18/02.

This action is non-final.

3.   Claims 1-23 and 25-41 are pending in this application. Claims 1, 21-23 and 41

are independent claims. In the Amendment, filed on 7/18/02, claims 7, 8, 27, 28 and 40

were amended.

        This application claims provisional application no. 60/107,875 filed on

11/09/1998.

4.   The present title of the invention is "Graphics Display System With Anti-Aliased

Text and Graphics Feature" as filed originally.

Claim Rejections - 35 USC § 102

5.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

6.   Claims 1, 6 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated

by Gloudemans et al. (6,229,550).

As per claim 1, Gloudemans et al, hereinafter Gloudemans, discloses a method

of displaying a graphical element comprising the steps of:

filtering the graphical element with a low pass filter to generate a multi-level value

per pixel at an intended final display resolution ("If the pixels are to be used to generate

an inclusion, then a display filter is created which describes the characteristics of the

pixels in the set", column 2, line 5-54, and "Any number of percentages may be

employed, depending upon the resolution that is desired for the filter", column 23, line 5-

7. Thus, a multi-level value at the desired final resolution is determined.); and

using the multi-level values as alpha blend values for the graphical element in a

subsequent compositing stage ("Once the blending coefficients are set for each of the

vertices of the polygons, blending coefficients can be determined for each pixel in each

polygon. Using the blending coefficients, the graphic can be blended with the video",

column 3, line 14-17),

wherein generation of the multi-level values do not depend on alpha blend values

that existed prior to filtering ("Each of the vertices on the border lines are given a

nominal blending coefficient", column 2, line 61-63. Thus, the alpha blending value does

not depend on existed alpha value prior to filtering.).

7.   As per claim 6, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 1, supra, and further discloses wherein the low pass filter is a box filter (the inclusion filter, column 2, line 50-55).

8.   As per claims 17 and 18, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 1, supra, and further discloses an outline of the graphical element, including all colors other than background color, is filtered using the low pass filter, wherein the graphical element has a plurality of foreground colors and wherein the filtered outline is used as an alpha per pixel value ("Each polygon has its vertices on edge lines are given a nominal blending coefficient", column 2, line 62-55).

Claim Rejections - 35 USC § 103

9.   Claims 2-5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Gloudemans</u> (6,038,031), and further in view of Foley et al. (Computer Graphics: Principles and Practice).

As per claims 2-5, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 1, supra.

It is noted that <u>Gloudemans</u> does not explicitly disclose the graphical element is "initially rendered at a higher resolution than the intended final display resolution", and "is initially rendered at four times the resolution of the intended final display resolution in a horizontal axis", and "is initially rendered at four times the resolution of the intended final display resolution in a vertical axis", however, this is known in the art as taught by

Foley et al., hereinafter, Foley. Foley discloses that in order to prevent damage caused

by an inadequate initial sampling rate "a rule of thumb is that supersampling four times

in each of x and y often will be satisfactory", page 643, line 4-5.

Thus, It would have been obvious to one of ordinary in the art at the time the

invention was made to incorporate the teaching of Foley into Gloudemans in order to

prevent image damage caused by inadequate sampling.

10.   Claims 9-16, 19-20, 23, 26 and 29-39 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Gloudemans (6,038,031).

As per claim 9, Gloudemans demonstrated all elements as applied in the

rejection of independent claim 1, supra.

As for using "the alpha blend values include CLUT indexes, each CLUT index is

associated with a CLUT entry, and each CLUT entry contains a CLUT alpha blend

value", the method of using CLUT for blending color is notoriously well known in the art,

therefore would have been obvious to use it for faster alpha blending.

11.   As per claim 10, Gloudemans demonstrated all elements as applied in the

rejection of independent claim 1, supra.

As for "the alpha blend values are used to form alpha portions of pixels having a

color portion and an alpha portion", since Gloudemans discloses the blending coefficient

is based on the luminance and chrominance characteristics (Abstract), it is obvious it

has a color portion as well as an alpha portion.

12.   As per claim 11, Gloudemans demonstrated all elements as applied in the

rejection of dependent claim 10, supra.

As for the pixels having color portions and alpha portions are in an alphaRGB (4,4,4,4) format, the format is notoriously well known in the art and would have been obvious to use it at the time of invention because it is a designer's choice of a well known format.

13.   As per claim 12, Gloudemans demonstrated all elements as applied in the rejection of independent claim 1, supra.

As for the graphical element has a plurality of foreground colors, which are filtered using a low pass filter, Gloudemans's image has luminance and chrominance characteristics and is using display filter, it is obvious that the pixels have a plurality of colors.

14.   As per claim 13, Gloudemans demonstrated all elements as applied in the rejection of dependent claim 12, supra.

As for the filtered plurality of foreground colors are used as color portions of pixels having a color portion and an alpha portion, since Gloudemans discloses the blending coefficient is based on the luminance and chrominance characteristics (Abstract), it is obvious it has a color portion as well as an alpha portion.

15.   As per claim 14, Gloudemans demonstrated all elements as applied in the rejection of dependent claim 13, supra.

As for the pixels having a color portion and an alpha portion are in an alphaRGB format, since Gloudemans discloses the blending coefficient is based on the luminance and chrominance characteristics (Abstract), it is obvious it has a color portion as well as an alpha portion.

16.   As per claim 15, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 13, supra.

As for the pixels having a color portion and an alpha portion are in an alphaYUV format, since the YUV format is an alternate color coding system in the computer graphics industry, It would have been obvious to one of ordinary in the art at the time the invention was made to also incorporate the alternate format.

17.   As per claim 16, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 12, supra.

As for the filtered plurality of foreground colors are used as color choices in a CLUT format, since the method of using CLUT for blending color is notoriously well known in the art, therefore would have been obvious to use it for faster color blending.

18.   As per claim 19, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 18, supra.

As for the filtered outline is used as the alpha per pixel value in a direct color format, the direct color format including an alphaRGB format, the format is notoriously well known in the art and would have been obvious to use it at the time of invention because it is a designer's choice of a well known format

19.   As per claim 20, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 18, supra.

As for the filtered outline is used as a choice of an alpha value per CLUT entry in a CLUT format, the method of using CLUT for blending color is notoriously well known, therefore would have been obvious to use it for faster color blending.

20.   As per claim 23, <u>Gloudemans</u> discloses a graphics display system for displaying

a graphical element comprising:

a low pass filter for filtering the graphical element to generate multi-level values,

one multi-level value per each pixel, at an intended final display resolution (Figure 4;

430);

wherein generation of the multi-level values do not depend on alpha blend values

that existed prior to filtering ("At the edge of the cut-out, where valid and invalid source

pixels are adjacent, the alpha values after filtering vary in proportion to the distance

from the edge of the cut-out", column 6, line 52-55).

As for display buffer and display engine, these device are notoriously known in

the art and would have been obvious to use them at the time the invention was made in

order to display the image.

21.   As per claim 25, <u>Gloudemans</u> demonstrated all elements as applied in the

rejection of independent claim 23, supra.

It is noted that <u>Gloudemans</u> does not explicitly disclose the graphical element is

"initially rendered at a higher resolution than the intended final display resolution",

however, this is known in the art as taught by Foley. Foley discloses that in order to

prevent damage caused by an inadequate initial sampling rate "a rule of thumb is that

supersampling four times in each of x and y often will be satisfactory", page 643, line 4-

5.

22.   As per claim 26, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 23, supra, and further discloses wherein the low pass filter is a box filter ("four adjacent texels", column 2, line 54-55).

23.   As per claim 29, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 23, supra.

As for including CLUT indexes in alpha blending, the method is notoriously in the art, therefore would have been obvious to use it for faster alpha blending.

24.   As per claim 30, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 23, supra.

As for "the alpha blend values are used to form alpha portions of pixels having a color portion and an alpha portion", since <u>Gloudemans</u> discloses the blending coefficient is based on the luminance and chrominance characteristics (Abstract), it is obvious it has a color portion as well as an alpha portion.

25.   As per claim 31, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 30, supra.

As for the pixels having color portions and alpha portions are in an alphaRGB (4,4,4,4) format, the format is notoriously well known in the art and would have been obvious to use it at the time of invention because it is a designer's choice of a well known format.

26.   As per claim 32, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 23, supra.

As for the graphical element has a plurality of foreground colors, which are filtered using a low pass filter, Gloudemans's source pixels are considered foreground colors, and since its color of pixels are represented in RGBA format, it is obvious that the pixels have a plurality of colors.

27.   As per claim 33, Gloudemans demonstrated all elements as applied in the rejection of dependent claim 32, supra.

As for the colors are used as color portions of pixels having a color portion and an alpha portion, since the color is represented in RGBA format it is obvious that it has a color portion and an alpha portion.

28.   As per claim 34, Gloudemans demonstrated all elements as applied in the rejection of dependent claim 33, supra.

As for the pixels having a color portion and an alpha portion are in an alphaRGB format, the representation is notoriously well known in the art and would have been obvious to used it at the time the invention was made in order to represent an alpha blending value.

29.   As per claim 35, Gloudemans demonstrated all elements as applied in the rejection of dependent claim 33, supra.

As for the pixels having a color portion and an alpha portion are in an alphaYUV format, the representation is notoriously well known in the art and would have been obvious to used it at the time the invention was made in order to represent an alpha blending value.

30.   As per claim 36, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 32, supra.

As for the filtered plurality of foreground colors are used as color choices in a CLUT format, since the method of using CLUT for blending color is notoriously well known in the art, therefore would have been obvious to use it at the time the invention was for faster color blending.

31.   As per claims 37 and 38, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of independent claim 23, supra, and further discloses wherein an outline of the graphical element, including all colors other than background color, is filtered using the low pass filter, wherein the graphical element has a plurality of foreground colors and wherein the filtered outline is used as an alpha per pixel value ("a display filter is created", column 2, line 51-52, and "Each of the vertices on the border lines are given a nominal blending coefficient", column 2, line 61-63).

32.   As per claim 39, <u>Gloudemans</u> demonstrated all elements as applied in the rejection of dependent claim 38, supra.

As for the filtered outline is used as the alpha per pixel value in a direct color format, the direct color format including an alphaRGB format, the format is notoriously well known in the art and would have been obvious to use it as the time of invention because it is designer's choice of a well known format.

Allowable Subject Matter

33.   Claims 7, 8, 21, 22, 27, 28, 40 and 41 are allowed.

Response to Arguments

34.   Applicant's arguments with respect to claims 1 and 23 have been considered but are moot in view of the new ground(s) of rejection.

Inquiries

35.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-6133**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
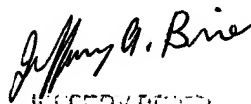
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Ryan Yang
August 9, 2002

JEFFERY BRIEN
PRIMARY EXAMINER